

Amendments to the Claims:

This listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-10. (Cancelled)

11. (Currently Amended) A switch structure for switching data including:
a matrix of switching elements arranged in rows and columns;
each row of switching elements in said matrix having a first set of bidirectional data links wherein each switching element in said each row is connected to other switching elements in the same row by links of said first set;
each column of switching elements in said matrix having a second set of bidirectional data links wherein each switching element in said each column is connected to other switching elements in the same column by links of said second set;
wherein the matrix is adapted to interconnect data input to any one switching element in the matrix for output on any switching element in said matrix using said first and second sets of bidirectional links; and
wherein each switching element includes a first time-switching component including a number of data storage modules and a first time switching control means.

12. (Cancelled)

13. (Currently Amended) A switch structure for switching data including:
a matrix of switching elements arranged in rows and columns;
each row of switching elements in said matrix having a first set of bidirectional data links wherein each switching element in said each row is connected to other switching elements in the same row by links of said first set;

each column of switching elements in said matrix having a second set of bidirectional data links wherein each switching element in said each column is connected to other switching elements in the same column by links of said second set; wherein the matrix is adapted to interconnect data input to any one switching element in the matrix for output on any switching element in said matrix using said first and second sets of bidirectional links; and A switch structure as claimed in claim 11

wherein each switching element includes a first space switching component including a first selector means and a first space switching control means.

14. (Original) A switch structure as claimed in claim 13 wherein each switching element includes a second space switching component including a second selector means and a second space switching control means.

15. (Currently Amended) A switch structure as claimed in claim 11 ~~claim 14~~ wherein each data storage module receives time slot data from the first time switching control means and other switching elements in the same row.

16. (Original) A switch structure as claimed in claim 15 wherein the first time switching control means includes a number of time switching control store modules corresponding to the number of bidirectional data links in said second set of bidirectional data links.

17. (Original) A switch structure as claimed in claim 16 wherein each data storage module includes a number of output ports such that data is read from a designated location in each data storage module by a respective time switching control store module and output on one of the output ports of each data storage module and transmitted to the first selector means.

18. (Original) A switch structure as claimed in claim 17 wherein the first selector means includes a number of selector modules such that the data read from each data

storage module by the respective time switching control store module is input to a corresponding selector module.

19. (Original) A switch structure as claimed in claim 18 wherein the first space switching control means includes a number of space switching control store modules corresponding to the number of bidirectional data links in said second set of bidirectional data links.

20. (Original) A switch structure as claimed in claim 19 wherein each space switching control store module stores control data used to select data from a corresponding selector module wherein data selected from each of the selector modules is output to the respective bidirectional data link in the second set of bidirectional data links.

21. (Original) A switch structure as claimed in claim 20 wherein the second selector means receives data transmitted on the second set of bidirectional data links.

22. (Original) A switch structure as claimed in claim 21 wherein the second selector means selects data to be output by the switching element in accordance with control data stored in the second space switching control means.

23. (Original) A switch structure including a matrix of switching elements arranged in rows and columns, wherein each switching element has data storage modules for storing timeslot data transmitted from other switching elements in the same row on a first set of bidirectional data links;

each data storage module having at least one input and a plurality of outputs;

each switching element having control means for outputting data from each data storage module in accordance with control data stored in said control means, the output data being transmitted to a selector means;

each switching element having a further control means for supplying control information to said selector means wherein said selector means outputs selector output data in accordance with said control information on a link of a second set of bidirectional data links connecting said switching element to other switching elements in the same column as said switching element; and

each switching element having a further selector means for receiving data from other switching elements in the same column as said switching element to be output from a switch port of said switching element.

24. (Original) A switch structure as claimed in claim 23 wherein the control means includes a number of control store modules and the selector means includes a number of corresponding selector modules.

25. (Original) A switch structure as claimed in claim 24 wherein data received and stored in each data storage module is stored at an address location in each storage module in accordance with a time slot counter means.

26. (Original) A switch structure for switching data, including:
a matrix of switching elements arranged in rows and columns;
a first set of bidirectional data links connecting switching elements in the same row;

a second set of bidirectional data links connecting switching elements in the same column;

each switching element having data storage modules for storing data received from other switching elements in the same row over said first set of links;

each switching element further having first selector means for selecting the stored data onto a link of said second set of links;

each switching element having second selector means for receiving data transmitted on said second set of links from other switching elements in the same column;

wherein data received at a switch port of an originating switching element is switched to a switch port of a destination switching element in said matrix using said first and second sets of links to transmit said data and selecting the data, through said second selector means, to be output on said switch port of said destination switching element.

27. (Original) A switch structure as claimed in claim 26 wherein the originating switching element may also be the destination switching element.

28. (Currently Amended) A switch structure as claimed in claim 26 ~~any previous claim~~ wherein the switching elements form a TSS switch structure.

29. (Original) A method of switching data from a switch port of an originating switching element to a switch port of a destination switching element of a switch matrix, wherein the switch matrix is arranged in rows and columns of switching elements, said method including the steps of:

receiving data at said switch port of said originating switching element;

transmitting said data to be stored in data storage means in each switching element in the same row as said originating switching element;

reading the stored data under the control of a first control means in one of the switching elements in said same row and the same column as said destination switching element to a first selector means;

selecting said data, through said first selector means to be output onto one of a set of data links connecting switching elements in said same column,

said destination switching element receiving the selected data at a second selector means;

wherein said selected data is then output to the switch port of said destination switching element through said second selector means.

30. (Original) A method of switching data using a switch structure including a matrix of switching elements arranged in rows and columns, wherein the data is switched from a switch port of an originating switching element to a switch port of a destination switching element in the matrix, said method including the steps of:

receiving data at said switch port of said originating switching element;

transmitting said received data over a first set of bidirectional links to one or more switching elements in the same row as said originating switching element;

storing said data in said one or more switching elements;

selecting said stored data to be output on a link of a second set of bidirectional links;

receiving the selected data at the destination switching element, and outputting the selected data on the switch port of said destination switching element.